INTERNATIONAL STANDARD

ISO 6393

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Earth-moving machinery — Determination of sound power level — Stationary test conditions

Engins de terrassement — Détermination du niveau de puissance acoustique — Conditions d'essai statique

Reference number
ISO 6393:2008(E)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6393 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 2, *Safety requirements and human factors*, in collaboration with Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

This third edition cancels and replaces the second edition (ISO 6393:1998), which has been technically revised.

Introduction

This International Standard is a specific test code for earth-moving machinery as defined in ISO 6165.

Specific procedures are described in this International Standard to enable the sound power emission in stationary test conditions to be determined in a manner which is repeatable. Attachments (bucket, dozer, etc.) for the manufacturer's production version are intended to be fitted since this is the configuration most likely to exist when the machine is in actual use.

This International Standard enables compliance with noise limits to be determined. It can also be used for evaluation purposes in noise reduction investigations.

A complementary test code is given in ISO 6394. This other specific test code is intended to be used to determine the noise emitted by earth-moving machinery, measured at the operator's position in terms of the A-weighted sound pressure level, with the machine under stationary test conditions.

Corresponding measurements of noise emitted to the environment and noise at the operator's position under dynamic test conditions are described in ISO 6395 and ISO 6396 respectively.

Earth-moving machinery — Determination of sound power level — Stationary test conditions

1 Scope

This International Standard specifies a method for determining the noise emitted to the environment by earth-moving machinery, measured in terms of the A-weighted sound power level while the machine is stationary and with the engine operating at the rated speed under no-load conditions.

It is applicable to earth-moving machinery as specified in Annex A and as defined in ISO 6165.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3744:—[1], *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering method for an essentially free field over a reflecting plane*

ISO 6165, *Earth-moving machinery — Basic types — Identification and terms and definitions*

ISO 9249, *Earth-moving machinery — Engine test code — Net power*

IEC 61672-1, *Electroacoustics — Sound level meters — Part 1: Specifications*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 3744 and ISO 6165, and the following, apply.

3.1
time-averaged A-weighted sound pressure level

$L_{p\mathrm{A},T}$

A-weighted sound pressure level averaged on an energy basis over the whole measurement period, T

3.2
A-weighted sound power level

$L_{W\mathrm{A}}$

quantity obtained from the time-averaged A-weighted sound pressure levels averaged over the measurement surface on an energy basis

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[1] To be published. (Revision of ISO 3744:1994.)